PATENT ABSTRACTS OF JAPAN

(11)Publication number : **62-219677**
(43)Date of publication of application : **26.09.1987**

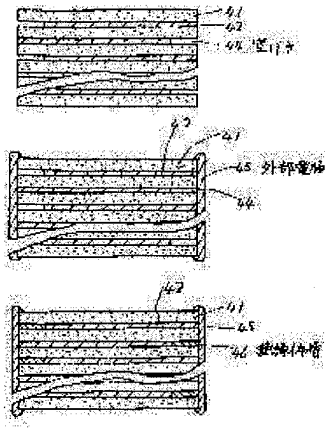
(51)Int.CI. H01L 41/22

(21)Application number : **61-060682**
(22)Date of filing : **20.03.1986**

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(54) MANUFACTURE OF LAMINATED DISPLACEMENT GENERATING ELEMENT

(57)Abstract:
PURPOSE: To obtain an element having excellent adhesive properties among displacement generating layers and internal electrode layers by alternately laminating a plurality of the displacement generating layers and internal electrodes and filling air gaps in a laminate, in which the air gaps are formed to the peripheral sections of the internal electrode layers, with an insulator under decompression.
CONSTITUTION: Air gaps 44 in a laminate in which a plurality of displacement generating layers 41 and internal electrode layers 42 are laminated alternately, the areas of the internal electrode layers 42 are made smaller than those of the displacement generating layers 41 and the air gaps 44 are shaped to the peripheral sections of the internal electrode layers 42 are filled with an insulator under decompression. Pt paste is applied onto the whole surface except the end sections of three sides on a green sheet consisting of a piezoelectric material, and carbon paste is applied to a residual section. When the green sheets are laminated and baked, carbon paste disappears, and air gaps 44 are shaped. Ag paste is printed on side surfaces in order to connect the internal electrode 42 exposed on every other layer, external electrodes 45 are formed through baking, an element is dipped in an epoxy resin and decompressed, the element is taken out, and the epoxy resin is cured through heat treatment, thus forming insulator layers 46.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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CLIPPEDIMAGE= JP362219677A
PAT-NO: JP362219677A
DOCUMENT-IDENTIFIER: JP 62219677 A
TITLE: MANUFACTURE OF LAMINATED DISPLACEMENT GENERATING ELEMENT

PUBN-DATE: September 26, 1987

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APPL-NO: JP61060682
APPL-DATE: March 20, 1986

INT-CL_(IPC): H01L041/22
US-CL-CURRENT: 438/FOR.350,438/643

ABSTRACT:
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